

IN THE CLAIMS

Please cancel claims 4, 12, and 19-22.

Please amend claims 1, 5, 11, 14, 15, 17, and 18 to read as follows:

1. (Amended) An allelic ladder mixture comprising one or more of the following allelic ladders :-

i) an allelic ladder for locus HUMVWFA31/A comprising one or more alleles consisting of sequences :-

TCTA TCTG TCTA (TCTG)₄ (TCTA)₃ - SEQ ID NO 1; or

TCTA (TCTG)₄ (TCTA)₇ - SEQ ID NO 2; or

(TCTA)₂ (TCTG)₄ (TCTA)₃ TCCA (TCTA)₃ - SEQ ID NO 3;

ii) an allelic ladder for locus HUMTHO1 comprising an allele consisting of sequence :-

(TCAT)₄ CAT (TCAT)₇ TCGT TCAT - SEQ ID NO 4;

iii) an allelic ladder for locus D8S1179 comprising an allele consisting of sequence:-

(TCTA)₂ TCTG(TCTA)₁₆ - SEQ ID NO 6;

iv) an allelic ladder for locus HUMFIBRA/FGA comprising one or more alleles consisting of sequences :-

(TTTC)₃ TTTT TTCT (CTTT)₅ T (CTTT)₃ CTCC (TTCC)₂ - SEQ ID

NO 7; or

(TTTC)₃ TTTT TTCT (CTTT)₁₃ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ

ID NO 8; or

(TTTC)₃ TTTT TTCT (CTTT)₁₆ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ

ID NO 9; or

(TTTC)₄ TTTT TT (CTTT)₁₅ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ

ID NO 10; or

(TTTC)₄ TTTT TT (CTTT)₁₆ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ

ID NO 11; or

(TTTC)₄ TTTT TT (CTTT)₁₇ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ

ID NO 12; or

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₄ (CTTT)₁₃ (CTTC)₄ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 13; or

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 14; or

(TTTC)₄ TTTT TT (CTTT)₁₁ (CTGT)₃ (CTTT)₁₄ (CTTC)₃ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 15; or

(TTTC)₄ TTTT TT (CTTT)₁₀ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 16; or

(TTTC)₄ TTTT TT (CTTT)₁₂ (CTGT)₅ (CTTT)₁₄ (CTTC)₃ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 17; or

(TTTC)₄ TTTT TT (CTTT)₁₄ (CTGT)₃ (CTTT)₁₄ (CTTC)₄ (CTTT)₃

CTCC (TTCC)₄ - SEQ ID NO 18;

v) an allelic ladder for locus D21S11 comprising one or more alleles consisting of sequences :-

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA(TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₆ TCGTCT - SEQ ID NO 19; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₉
TCGTCT - SEQ ID NO 20 or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₀
TCGTCT - SEQ ID NO 21; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₈ TCGTCT - SEQ ID NO 22; or

(TCTA)₅ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₉ TCGTCT - SEQ ID NO 23; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₀ TCGTCT - SEQ ID NO 24; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TCGTCT - SEQ ID NO 25; or

(TCTA)₆ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TCGTCT - SEQ ID NO 26; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 27; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TA TCTA TCGTCT - SEQ ID NO 28; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TA TCTA TCGTCT - SEQ ID NO 29; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₃ TA TCTA TCGTCT - SEQ ID NO 30; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₄ TATCTA TCGTCT - SEQ ID NO 31; or

(TCTA)₁₀ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 32; or

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 33; or

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₃ TCGTCT - SEQ ID NO 34; or

(TCTA)₁₃ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 35;

vi) an allelic ladder for locus D18S51 comprising an allele consisting of
sequence:-

(AGAA)₈ - SEQ ID NO 36.

5. (Amended) An allelic ladder mixture according to claim 1 in which the allelic ladders in
the mixture each include at least 7 alleles.

11. (Amended) An allelic ladder mixture comprising an allelic ladder for one or more of the following loci, with lowest molecular weight allele and uppermost molecular weight allele designation as follows :-

	Locus	Low MW allele Designation	High MW allele Designation
a)	HUMVWFA31/A	10	21
b)	HUMTH01	4	13.3
c)	D8S1179	7	19
d)	HUMFIBRA/FGA	16.1	50.2
e)	D21S11	53	81
f)	D18S51	8	27

14. (Amended) A method of analysing one or more samples comprising :-

- a) obtaining genomic DNA from the sample;
- b) amplifying the DNA;
- c) obtaining an indication of one or more of the constituent parts of the sample;

and comparing the indications with an allelic ladder mixture comprising one or more of the following allelic ladders :-

- i) an allelic ladder for locus HUMVWFA31/A comprising one or more alleles consisting of sequences :-

TCTA TCTG TCTA (TCTG)₄ (TCTA)₃ - SEQ ID NO 1; or

TCTA (TCTG)₄ (TCTA)₇ - SEQ ID NO 2; or

(TCTA)₂ (TCTG)₄ (TCTA)₃ TCCA (TCTA)₃ - SEQ ID NO 3

ii) an allelic ladder for locus HUMTHO1 comprising an allele consisting of sequence :-

(TCAT)₄ CAT (TCAT)₇ TCGT TCAT - SEQ ID NO 4;

iii) an allelic ladder for locus D8S1179 comprising an allele consisting of sequence:-

(TCTA)₂ TCTG (TCTA)₁₆ - SEQ ID NO 6;

iv) an allelic ladder for locus HUMFIBRA/FGA comprising one or more alleles consisting of the sequences :-

(TTTC)₃ TTTT TTCT (CTTT)₅ T (CTTT)₃ CTCC (TTCC)₂ - SEQ ID NO 7; or

(TTTC)₃ TTTT TTCT (CTTT)₁₃ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ ID NO 8; or

(TTTC)₃ TTTT TTCT (CTTT)₁₆ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ ID NO 9; or

(TTTC)₄ TTTT TT (CTTT)₁₅ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 10; or

(TTTC)₄ TTTT TT (CTTT)₁₆ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 11; or

(TTTC)₄ TTTT TT (CTTT)₁₇ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 12; or

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₄ (CTTT)₁₃ (CTTC)₄ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 13; or

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃
CTCC (TTCC)₄ - SEQ ID NO 14; or

(TTTC)₄ TTTT TT (CTTT)₁₁ (CTGT)₃ (CTTT)₁₄ (CTTC)₃ (CTTT)₃
CTCC (TTCC)₄ - SEQ ID NO 15; or

(TTTC)₄ TTTT TT (CTTT)₁₀ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃
CTCC (TTCC)₄ - SEQ ID NO 16; or

(TTTC)₄ TTTT TT (CTTT)₁₂ (CTGT)₅ (CTTT)₁₄ (CTTC)₃ (CTTT)₃
CTCC (TTCC)₄ - SEQ ID NO 17; or

(TTTC)₄ TTTT TT (CTTT)₁₄ (CTGT)₃ (CTTT)₁₄ (CTTC)₄ (CTTT)₃
CTCC (TTCC)₄ - SEQ ID NO 18;

v) an allelic ladder for locus D21S11 comprising one or more alleles
consisting of sequences :-

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA(TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₆ TCGTCT - SEQ ID NO 19; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₉
TCGTCT - SEQ ID NO 20; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₀
TCGTCT - SEQ ID NO 21; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₈ TCGTCT - SEQ ID NO 22; or

(TCTA)₅ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₉ TCGTCT - SEQ ID NO 23; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₀ TCGTCT - SEQ ID NO 24; or

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TCGTCT - SEQ ID NO 25; or

(TCTA)₆ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TCGTCT - SEQ ID NO 26; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 27; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₁ TA TCTA TCGTCT - SEQ ID NO 28; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TA TCTA TCGTCT - SEQ ID NO 29; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₃ TA TCTA TCGTCT - SEQ ID NO 30; or

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₄ TATCTA TCGTCT - SEQ ID NO 31; or

(TCTA)₁₀ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 32; or

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 33; or

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₃ TCGTCT - SEQ ID NO 34; or

(TCTA)₁₃ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA
(TCTA)₁₂ TCGTCT - SEQ ID NO 35;

vi) an allelic ladder for locus D18S51 comprising an allele consisting of
sequence :-

(AGAA)₈ - SEQ ID NO 36.

15. (Amended) A method according to claim 14 in which the DNA sample is one or more
of a sample taken from the scene of a crime, a sample associated with the scene of a crime, a sample
obtained from a suspect, a sample obtained from a human under consideration or a reference sample.

17. (Amended) One or more isolated alleles comprising or consisting of sequences

TCTA TCTG TCTA (TCTG)₄ (TCTA)₃ - SEQ ID NO 1;

TCTA (TCTG)₄ (TCTA)₇ - SEQ ID NO 2;

(TCTA)₂ (TCTG)₄ (TCTA)₃ TCCA (TCTA)₃ - SEQ ID NO 3;

(TCAT)₄ CAT (TCAT)₇ TCGT TCAT - SEQ ID NO 4;

(TCTA)₂ TCTG (TCTA)₁₆ - SEQ ID NO 6;

(TTTC)₃ TTTT TTCT (CTTT)₅ T (CTTT)₃ CTCC (TTCC)₂ - SEQ ID NO 7;

(TTTC)₃ TTTT TTCT (CTTT)₁₃ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ ID NO 8;

(TTTC)₃ TTTT TTCT (CTTT)₁₆ CCTT (CTTT)₅ CTCC (TTCC)₂ - SEQ ID NO 9;

(TTTC)₄ TTTT TT (CTTT)₁₅ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 10;

(TTTC)₄ TTTT TT (CTTT)₁₆ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 11;

(TTTC)₄ TTTT TT (CTTT)₁₇ (CTTC)₃ (CTTT)₃ CTCC (TTCC)₄ - SEQ ID NO 12;

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₄ (CTTT)₁₃ (CTTC)₄ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 13;

(TTTC)₄ TTTT TT (CTTT)₈ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 14;

(TTTC)₄ TTTT TT (CTTT)₁₁ (CTGT)₃ (CTTT)₁₄ (CTTC)₃ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 15;

(TTTC)₄ TTTT TT (CTTT)₁₀ (CTGT)₅ (CTTT)₁₃ (CTTC)₄ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 16;

(TTTC)₄ TTTT TT (CTTT)₁₂ (CTGT)₅ (CTTT)₁₄ (CTTC)₃ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 17;

(TTTC)₄ TTTT TT (CTTT)₁₄ (CTGT)₃ (CTTT)₁₄ (CTTC)₄ (CTTT)₃ CTCC
(TTCC)₄ - SEQ ID NO 18;

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA(TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₆
TCGTCT - SEQ ID NO 19;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₉ TCGTCT - SEQ
ID NO 20;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₀ TCGTCT - SEQ
ID NO 21;

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₈
TCGTCT - SEQ ID NO 22;

(TCTA)₅ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₉
TCGTCT - SEQ ID NO 23;

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₀
TCGTCT - SEQ ID NO 24;

(TCTA)₄ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₁
TCGTCT - SEQ ID NO 25;

(TCTA)₆ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₁
TCGTCT - SEQ ID NO 26;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₂
TCGTCT - SEQ ID NO 27;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₁ TA
TCTA TCGTCT - SEQ ID NO 28;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₂ TA
TCTA TCGTCT - SEQ ID NO 29;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₃ TA
TCTA TCGTCT - SEQ ID NO 30;

(TCTA)₅ (TCTG)₆ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₄
TATCTA TCGTCT - SEQ ID NO 31;

(TCTA)₁₀ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₂
TCGTCT - SEQ ID NO 32;

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₂
TCGTCT - SEQ ID NO 33;

(TCTA)₁₁ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₃
TCGTCT - SEQ ID NO 34;

(TCTA)₁₃ (TCTG)₅ (TCTA)₃ TA (TCTA)₃ TCA (TCTA)₂ TCCATA (TCTA)₁₂
TCGTCT - SEQ ID NO 35; or
(AGAA)₈ - SEQ ID NO 36.

18. (Amended) One or more alleles according to claim 17 in which the alleles are provided purified from alleles other than those of HUMVWFA31/A, HUMTH01, D8S1179, HUMFIBRA/FGA, D21S11, D18S51 or AMG loci.